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Comments of the American Council for an Energy-Efficient Economy

To the Public Service Commission of Wisconsin

Quadrennial Planning Process II
Docket 5-FE-10

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March 14, 2014

The Public Service Commission of Wisconsin (the Commission) is seeking input from all stakeholders on questions regarding the Quadrennial Planning Process II. In response the American Council for an Energy-Efficient Economy (ACEEE) respectfully submits these comments to the Commission. ACEEE appreciates this opportunity to comment on the important issues addressed in this proceeding regarding energy efficiency and renewable energy in Wisconsin.

Below are ACEEE's comments to selected issues raised in this proceeding.

1. Role of Focus in Positioning Wisconsin to Cost-Effectively Meet Federal Carbon Standards

Wisconsin should use energy efficiency programs as part of compliance for emerging carbon standards. It is by far the cheapest carbon emission reduction option available. The energy savings achieved by Focus on Energy programs over many years demonstrate very clearly the value and cost-effectiveness of energy efficiency. There remains a large potential for additional cost-effective energy efficiency savings even without accounting for the additional benefits of carbon reductions. By using energy efficiency to meet emerging federal carbon standards, the value of energy savings achieved through improved energy efficiency will increase. This will increase the amount of cost-effective energy efficiency available in Wisconsin.

To best be able to use energy efficiency as a carbon emissions compliance strategy, Focus on Energy should emphasize end-use energy efficiency as these improvements yield higher energy savings than those measures that target demand savings. It also will be important to continue effective, robust evaluation of Focus on Energy program impacts. While details of compliance have yet to be established, clearly it will be important that credits given to energy efficiency for carbon reductions must be based on robust evaluation that accurately quantifies program impacts in terms of energy savings.

Attributes of carbon reductions should be quantified in monetary terms and could be used to screen measures and programs for cost-effectiveness. The value to be added due to meeting carbon emissions reductions would make greater amounts of energy efficiency cost-effective. This could justify expansion of programs to capture higher savings and associated carbon reductions in order to meet carbon reduction requirements most cost-effectively.

2. Energy and/or Demand Emphasis

Energy savings should still be the primary emphasis of Focus on Energy. Demand savings also are important, but the economics and market dynamics work much better to support demand response apart from Focus on Energy. The nature of demand response and load management also is best suited for utility administration. The technologies, services and actions necessary for load management and demand response fall best within utility operations. Utilities are the entities that closely monitor and respond to customer and system loads. They are the ones that would need to recognize the need for initiating demand response measures through the variety of such options available, whether through price signals or customer curtailments and load reductions. Demand response requires communications directly with utility systems. Focus on Energy could facilitate and coordinate customer involvement with utility demand response programs and services, but such work should be funded separately from Focus on Energy. Markets for electricity generally do provide effective cost signals at times when demand response is needed.

Customer programs offered by Focus on Energy should take an integrated approach to demand and energy savings---addressing energy-efficiency first to ensure loads are energy-efficient; then addressing demand response and demand savings opportunities above what is achieved through energy efficiency. Clearly this would require Focus on Energy to coordinate its programs with any demand response programs available through utilities. Such coordinated programs can yield the highest benefits to customers. There also are synergies between demand response and energy efficiency. Many of the same technologies that are used for demand response and load management can also address energy management in general—not just those more limited times when demand response is called for. As we gain more smart technologies—those technologies with advanced communications, monitoring and control capabilities---building systems will be able to part of the emerging smart grid and contribute to improved system efficiency and reliability.

Another strong reason for Focus on Energy's emphasis to be on energy savings is the opportunity emerging for using energy efficiency as a carbon emissions reduction option. As discussed above under issue #1, improved energy efficiency delivers larger reductions in energy use and, in turn, associated emissions of carbon than do measures that target demand reduction.

3. Overall Energy Goal Rather than Specific Goals for kWh, kW, and Therms

Focus on Energy should continue to have specific goals for kWh, kW and therm savings through improved customer end-use efficiency for electricity and natural gas technologies. That has been the objective of Focus on Energy and should remain so. It is not clear what advantages there would be to moving to overall energy goals. It well could raise more complicated issues associated with fuel switching; combined heat and power systems; alternative fuels; and thermal equivalents of renewable energy sources such as hydropower. There should be specific programs and policies in place to address such issues, especially as they may advance cleaner, more efficient energy technologies. However, using Focus on Energy seems an indirect and less effective way to achieve such objectives, at least without fundamental changes to the programs and services.

4. Examine Effective Rate Impact Mitigation Strategies that Could Be Achieved in the Planning Period

Our research and others shows clearly that energy efficiency is the lowest cost energy resource compared to supply options. ACEEE recently examined the cost of saved energy achieved by energy efficiency programs in 17 states. We found that the average cost is 2.8 cents per kilowatt-hour, with a range of 1.3 to 4.5 cents per kilowatt-hour. This is consistent with similar earlier research and parallel current research by other national organizations. These findings demonstrate clearly that energy efficiency is at least 1/3 the cost of any supply option. By definition, then, investing in more expensive options will have greater rate impacts than would occur by spending those dollars on energy efficiency.

The rate mitigation strategy of simply not investing in more of the long-term cheapest resource means that while there may be some near-term rate mitigation, in the long-term customers will face higher rates when there is a need to build or buy much more expensive supply resources. The Pacific Northwest, an area with some of the lowest electricity rates in the United States, has invested in energy efficiency as a priority energy resource for over 30 years. As a result, since 2005 the region has met increased customer demand through energy efficiency; the net result has been no overall load growth. Energy efficiency in the Northwest is the third largest energy resource, just behind coal generation.

As Wisconsin faces the need to retire and replace greater amounts of existing generation, it is clear that the state needs to fill this increasing need with low-cost, low-carbon energy resources. Energy efficiency should play prominently in this transition. Focus on Energy has demonstrated clearly that energy can be saved through customer programs very cost effectively. Wisconsin should be investing more heavily in energy efficiency as the lowest cost resource available. By not doing so, customers will be facing much greater costs in the future. Energy demand will be higher than it would need to be and the supply resources chosen to meet that higher demand will be more expensive.

Pilot Behavior Programs

While not one of the final five issues identified as the priority issues for comment, the Commission also invited input on other issues identified earlier in this proceeding. One of these issues is the inclusion of pilots for behavioral programs. ACEEE strongly supports inclusion of such pilots as a means to engage customers in energy efficiency and achieve higher energy and cost savings. The structure of Focus on Energy as a non-utility provider of customer program would require Focus on Energy to work with utilities on such pilots since metering and customer data are required. Such arrangements have been worked out successfully in other jurisdictions. ACEEE's research over many years on behavioral programs reveals that they can deliver additional energy savings cost-effectively and should be incorporated into portfolios of customer programs such as Focus on Energy.